



New species and host associations of commensal leucothoid amphipods from coral reefs in Florida and Belize (Crustacea:Amphipoda)

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Table of contents

Abstract	1
Introduction	1
Materials and methods	3
Results	3
<i>Leucothoe barana</i> n.sp.	5
<i>Leucothoe flammosa</i> n.sp.	10
<i>Leucothoe garifunae</i> n.sp.	15
<i>Leucothoe saron</i> n.sp.	20
<i>Leucothoe ubouhu</i> n.sp.	25
<i>Leucothoe wuriti</i> n.sp.	30
Discussion	37
Acknowledgements	43
References	43

Abstract

Six new amphipod species in the genus *Leucothoe* from the tropical western Atlantic Ocean are described and illustrated. Extensive field collecting and specialized underwater collecting techniques have documented 43 new invertebrate host records for these new taxa. Four of these new species inhabit interior canals of sponges; *Leucothoe barana* **n.sp.**, *Leucothoe garifunae* **n.sp.**, *Leucothoe saron* **n.sp.**, and *Leucothoe ubouhu* **n.sp.** A remarkable new species, *Leucothoe flammosa* **n.sp.**, nestles in the gills of seven species of bivalve mollusks. A single species, *Leucothoe wuriti* **n.sp.**, appears restricted to the branchial chamber of two species of solitary ascidians. Detailed illustrations and scanning electron microscopy enables comparison of ultrastructure details. More precise taxonomic character morphologies are also presented thus allowing improved taxonomic precision within the family Leucothoidae.

Key words: Amphipods, commensal, eusocial, coral reefs, marine biodiversity, sponges, tunicates, ascidians, *Gari'funa*

Introduction

In 2000 Jim Lowry *et al.* proposed merging the families Anamixidae and Leucothoidae. The revised Leucothoidae (*sensu lato*) is now comprised of 122 species in six genera. This includes 33 former anamixid species in *Anamixis* Stebbing, 1897 (19 spp.); *Nepanamixis* Thomas, 1997a (4 spp.); and *Paranamixis* Schellenberg, 1938 (10 spp.); and 89 leucothoid species, *Leucothoe* Leach, 1814a (86 spp.); *Leucothoella* Schellenberg, 1928b (2 spp.); and *Paraleucothoe* Stebbing, 1899 (1 sp.).